Listing of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Amendments to the Claims

1. (Currently Amended) A method, comprising:

a) illuminating nondestructively a forensic sample with light of a first wavelength λ_1; then

b) imaging a first image of the forensic sample using the light emitted from the sample at a second wavelength λ_2, the second wavelength filtered by an electro-optical tunable filter; then

c) imaging a second image of the forensic sample using the light emitted from the sample at a third wavelength λ_3 different from λ_2, the third wavelength filtered by an electro-optical tunable filter; then

~~c)~~ d) creating a calculated image of the forensic sample from the first image and the second image,

wherein said calculated image is a spatially accurate wavelength-resolved image.

2. (Original) The method of claim 1, further comprising correcting the calculated image using signals extracted from at least one of the first and second images, the signal extracted from a subset of pixels from at least one of the first and second image pixels.

3. (Original) The method of claim 2, wherein the subset of at least one of the first and second image pixels is a subset chosen outside an area of interest of the at least one of the first and second images.

4. (Original) The method of claim 3, wherein the correcting of the calculated image comprises subtracting a background signal provided by light of a wavelength λ from outside an area of interest from the image formed by light of wavelength λ_3 and λ_2 where λ is λ_3 or λ_2 or another wavelength.

5. (Original) The method of claim 1, wherein the forensic sample is an object carrying a suspected fingerprint.

6. (Original) The method of claim 5, further comprising correcting the calculated image using signals extracted from at least one of the first and second images, the signal extracted from a subset of pixels from at least one of the first and second images.

7. (Original) The method of claim 6, wherein the subset of at least one of the first and second image pixels is a subset chosen outside the area of the suspected fingerprint.

8. (Original) The method of claim 7, wherein the correcting of the calculated image comprises subtracting a background signal provided by light of a wavelength λ from outside the area of the suspected fingerprint from the image formed by light of wavelength λ_3 and λ_2, where λ is λ_3 or λ_2 or another wavelength.

9. (Original) The method of claim 1, wherein the forensic sample is an object carrying ink.

10. (Original) The method of claim 9, further comprising correcting the calculated image using signals extracted from at least one of the first and second images, the signal extracted from a subset of pixels from at least one of the first and second images.

11. (Original) The method of claim 10, wherein the subset of at least one of the first and second image pixels is a subset chosen outside the area of the ink.

12. (Original) The method of claim 11, wherein the correcting of the calculated image comprises subtracting a background signal provided by light of a wavelength λ from outside the area of ink from the images formed by light of wavelength λ_3 and λ_2, where λ is λ_3 or λ_2 or another wavelength.

13. (Original) The method of claim 1, wherein the forensic sample is an object carrying suspected gunshot residue.

14. (Original) The method of claim 13, further comprising correcting the calculated image using signals extracted from at least one of the first and second images, the signal extracted from a subset of pixels from at least one of the first and second images.

15. (Original) The method of claim 14, wherein the subset of at least one of the first and second image pixels is a subset chosen outside the area of interest of the suspected gunshot reside.

16. (Original) The method of claim 15, wherein the correcting of the calculated image comprises subtracting a background signal provided by light of a wavelength λ from outside the area of the suspected gunshot residue from the images formed by light of wavelength λ_3 and λ_2, where λ is λ_3 or λ_2 or another wavelength.

17. (Original) The method of claim 1, wherein the forensic sample is an object carrying a suspected condom lubricant.

18. (Original) The method of claim 17, further comprising correcting the calculated image using signals extracted from at least one of the first and second images, the signal extracted from a subset of pixels from at least one of the first and second images.

19. (Original) The method of claim 18, wherein the subset of at least one of the first and second image pixels is a subset chosen outside the area of the suspect condom lubricant.

20. (Original) The method of claim 19, wherein the correcting of the calculated image comprises subtracting a background signal provided by light of a wavelength λ from outside the area of the suspected condom lubricant from the images formed by light of wavelength λ_3 and λ_2, where λ is λ_3 or λ_2 or another wavelength.

21. (Original) The method of claim 1, wherein the forensic sample is a multilayer paint chip.

22. (Original) The method of claim 21, further comprising correcting the calculated image using signals extracted from at least one of the first and second images, the signal extracted from a subset of pixels from at least one of the first and second images.

23. (Original) The method of claim 22, wherein the subset of at least one of the first and second image pixels is a subset chosen outside the area of interest in the mu1tiplayer paint chip..

24. (Original) The method of claim 23, wherein the correcting of the calculated image comprises subtracting a background signal provided by light of a wavelength λ from outside the area of interest from the image formed by light of wavelength λ_3 and λ_2, where λ is λ_3 or λ_2 or another wavelength.

25. (Original) The method of claim 1, wherein the forensic sample is a fiber.

26. (Original) The method of claim 25, further comprising correcting the calculated image using signals extracted from at least one of the first and second images, the signal extracted from a subset of pixels from at least one of the first and second images.

27. (Original) The method of claim 26, wherein the subset of at least one of the first and second image pixels is a subset chosen outside the area of interest of the fiber.

28. (Original) The method of claim 27, wherein the correcting of the calculated image comprises subtracting a background signal provided by light of a wavelength λ from outside the area of the fiber from the images formed by light of wavelength λ_3 and λ_2, where λ is λ_3 or λ_2 or another wavelength.

29. (Original) The method of claim 1, wherein the forensic sample is a thin layer chromatography plate.

30. (Original) The method of claim 29, further comprising correcting the calculated image using signals extracted from at least one of the first and second images, the signal extracted from a subset of pixels from at least one of the first and second images.

31. (Original) The method of claim 30, wherein the subset of at least one of the first and second image pixels is a subset chosen outside the area of interest on the thin layer chromatography plate.

32. (Original) The method of claim 31, wherein the correcting of the calculated image comprises subtracting a background signal provided by light of a wavelength λ from outside the area of interest from the images formed by light of wavelength λ_3 and λ_2, where λ is λ_3 or λ_2 or another wavelength.